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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,134	08/16/2001	Toshiro Suzuki	500.40517X00	1258

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EXAMINER

TRAN, CONGVAN

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 06/18/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,134

Applicant(s)

SUZUKI ET AL.

Examiner

CongVan Tran

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 and 15-19 is/are allowed.
- 6) ☒ Claim(s) 9-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 10, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al. (6,748,218).

Regarding claims 10, 12, Johnson discloses a wireless communication method comprising the steps of: disposing a plurality of base stations at the vertices of each triangle on a plane (see fig.6, 1a-d and its description); constructing an antenna of each base station by three sector antennas (see fig.5, elements 1-3 and its description); and synthesizing received signals from and transmitted signals to said antenna elements (see fig.5A, elements 1-3 and its description).

3. Claims 9, 11, 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Klein et al. (6,707,798).

Regarding claims 9, 11, 13, Klein discloses a wireless communication method comprising the steps of: disposing a plurality of base stations at the vertices of each square on a plane (see fig.1a, 1a-d and its description); constructing an antenna of each base station by four sector antennas (see fig.1a, 4a-d, and its description); and

synthesizing received signals from and transmitted signals to said antenna elements (see it is inherent in the telecommunication, fig.1a and its description).

4. Claims 14 rejected under 35 U.S.C. 102(e) as being anticipated by Garrison (6,577,869).

Regarding claim 14, Garrison discloses a frequency re-use for TDD applications comprising the steps of: disposing a plurality of base stations in a square cell shape (see fig.7, and its description); constructing the antenna of each base station by 8 directional antennas (see fig.7, col.7, lines 28-67 and its description); and specifying the directivity of each antenna for each time slot so that two ones of three directional beams are perpendicular to each other and the other one is radiated at an angle of 135 degrees relative to said two beams (see fi.7-8, col.8, lines 1-12 and its description).

Allowable Subject Matter

5. Claims 1-8, and 15-19 are allowed.

Regarding claims 1 and 16, although, the prior arts disclose a wireless communication method including a wireless receiver, a wireless transmitter, and a processing unit. However, None of them teach selecting, determining, estimating a transmission beam slot on the basis of said determined beam direction information, and a table of the relations of transmission beam directions and the specific arrangement as described in claims 1 and 16.

Claims 2-8, and 17-19 are allowed as being dependent on independent claims 1 and 16.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to CongVan Tran whose telephone number is 703-305-4024. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CONG VAN TRAN
PATENT EXAMINER

CongVan Tran
Examiner
Art Unit 2683

CT
Jun 10, 2004.